THE CHEMIST AND DRUGGIST
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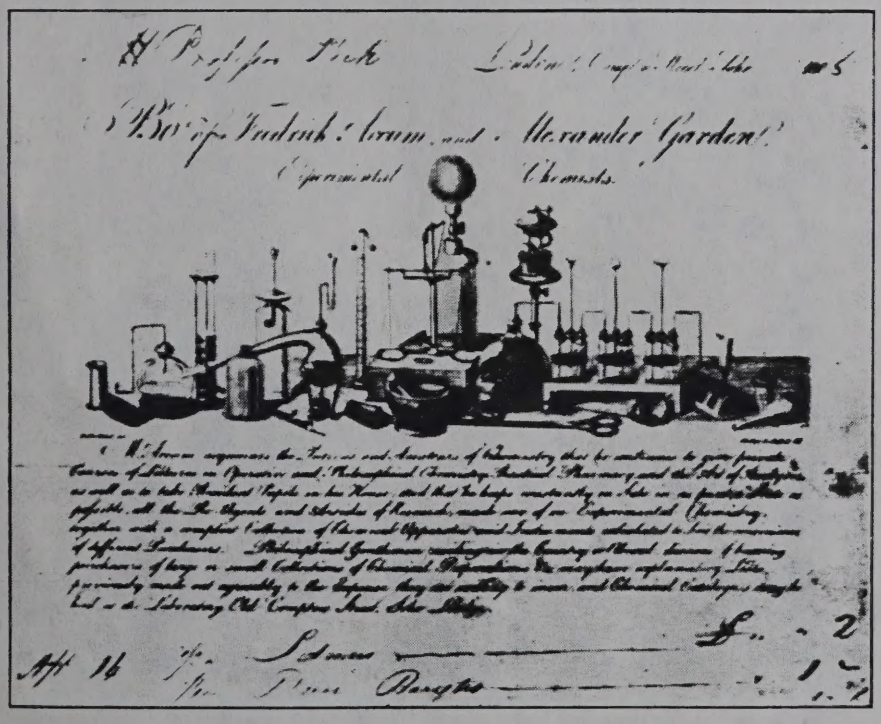
Fredrick Accum, *Operative Chemist*

A PIONEER in the Campaign against *ADULTERATION OF FOOD AND DRUGS*

AMONG THE NAMES OF those who through science have rendered great service to humanity is that of Friedrich Christian (Fredrick) Accum (1769-1838). A German by birth, he left Germany in 1793 to be in assistant in the laboratory of William Thomas Brande, apothecary to King George III, Arlington Street, London, and his name appears in respect of a number of contributions to the publication known as "Nicholson's Journal," the first (1798) being upon "The Light Emitted by Supersaturated Borate of Soda or Common Borax." A subsequent article related to "An Attempt to Discover the Genuineness and Purity of Drugs and Medicinal Preparations." In 1798 he began a series of articles on "An Attempt to Discover the Genuineness and Purity of Drugs and Medicinal Preparations," calling attention not only to the prevalence of adulteration, but also showing how even a skilled person could be deceived. Pharmacopœias also came in for some criticism, and improvements in methods of testing for purity were suggested. About 1800 he established a business and a laboratory in Old Compton Street, Soho, where he undertook commercial analyses and supplied apparatus and chemicals. He was joined in this enterprise by a former student, Alexander Garden, but after about ten years the partnership was dissolved and the latter started in business on his own account. Shortly afterwards Accum commenced a school there, giving lectures and taking pupils to work under his personal supervision. His activities at this time are well described by his letter heading: "Mr. Accum acquaints the Patrons and Amateurs of Chemistry that he continues to give private Courses on Operative and Philosophical Chemistry, Practical Pharmacy and the Art of Analysis. . . ." In 1801 Accum was appointed chemical operator at the Royal Institution. In the following year he began giving public lectures on chemistry and allied subjects. So popular did these become that his own laboratory was not large enough to accommodate his audience and he was obliged to take a hall for the purpose. His reputation as a teacher led to his appointment in 1809 as Professor of Chemistry at the Surrey Institution, Blackfriars, where he continued to give lectures in chemistry and pharmacy. His reputation as an analytical, technical and consulting chemist resulted in a demand for his services by manufacturers, and from time to time he undertook work for the Government. Extremely versatile, his work in the industrial sphere included the production of soda, investigations of materials for making earthenware, gas lighting, and the distillation of coal tar. It was perhaps as a pioneer in the campaign against the adulteration of food and drugs which brought him his greatest reputation and was also to some extent responsible for his downfall—at least so far as England was concerned. He had published a number of books prior to 1820, but in that year he issued "A Treatise on Adulterations of Food, and Culinary Poisons . . . and Methods of Detecting Them." Within one month one thousand copies had been sold and it was necessary to issue a reprint. Among the subjects of special interest dealt with in the first edition were "adulteration

FREDRICK ACCUM, F.L.S.



BILL-HEAD OF FREDRICK ACCUM AND ALEXANDER GARDEN, EXPERIMENTAL CHEMISTS

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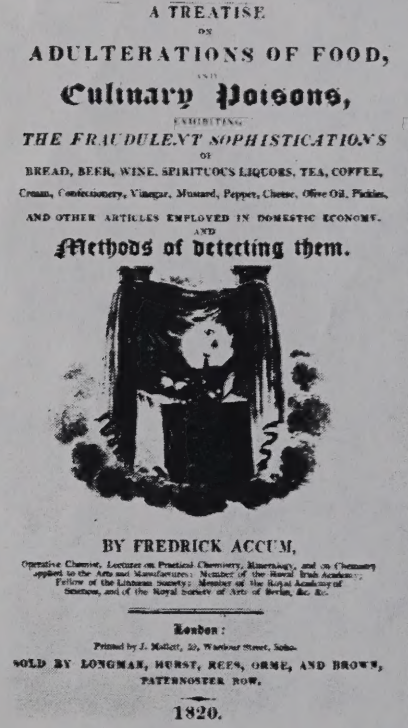
A Cartoon by Rowlandson of Accum giving a Chemical Lecture at the Surrey Institution, Blackfriars.

of lozenges and methods of detecting them," poisonous olive oil, adulteration of lemon acid and poisonous soda water. Considerable space was also devoted to the adulteration of beer, and under this heading is given a list of druggists and grocers prosecuted and convicted for supplying illegal ingredients to brewers, details of the illegal substances used for such adulteration, and of the ingredients seized at various breweries and brewers' druggists. Several additions were made to the second edition, many relating to drugs, e.g., adulteration of Peruvian bark, rhubarb powder, ipecacuanha, spirit of hartshorn, magnesia, calcined magnesia, calomel, syrup of buckthorn, worm-seed, arrowroot, essential oils, cinnamon and Spanish liquorice. In reference to the first-mentioned, Accum states that " the public are often served with a spurious compound of mahogany sawdust and oak wood, ground into powder, mixed with a proportion of good quinquina, and sold as genuine bark powder " ; of ipecacuanha, he alleges, " the white sort . . . after being pulverised by fraudulent druggists, and mixed with emetic tartar, is sold at a low price . . ." Accum's pure food and drugs campaign and his publication of the names of those responsible made him numerous enemies, particularly among wealthy and influential persons, and his downfall was encompassed in a curious way. It was brought to the notice of the authorities at the Royal Institution that Accum was removing pages from the books in their library. Eventually a search warrant was obtained, and in his desk were found many stray leaves which the librarian declared belonged to books of the Institution. Accum was charged with the theft, but the case was dismissed as baseless, the magistrate declaring that " however valuable the books might be from which the leaves found in the prisoner's house had been taken, yet the leaves separated from them were only waste paper. If they had weighed a pound, he would have committed him for the value of a pound of waste paper, but as that was not the case he discharged him." Accum's enemies made good use of the case, and eventually he returned to Germany, where in 1822 he became Professor of Technical Chemistry and Mineralogy at the Royal Industrial Institute and Professor of Chemistry and Physics at the Royal Academy of Construction in Berlin.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BY FREDRICK ACCUM,
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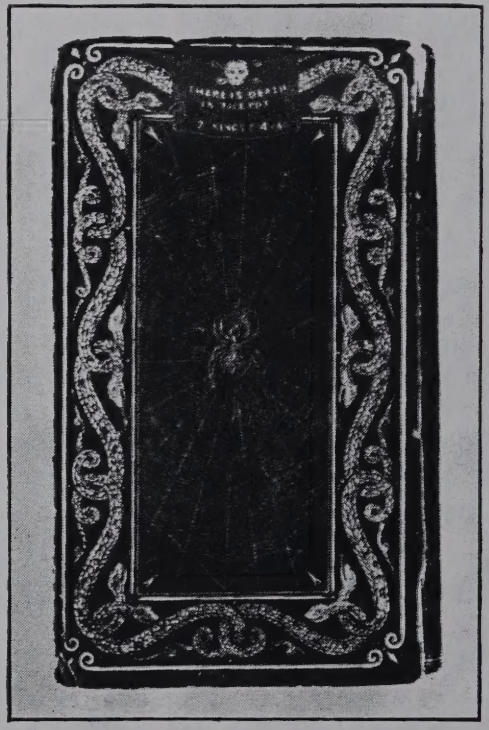
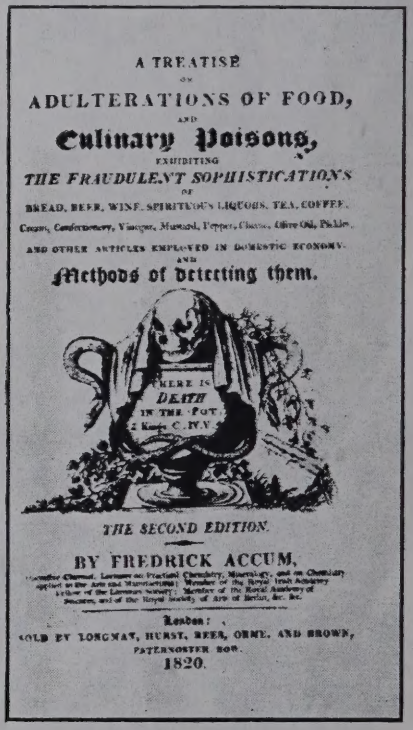
Title page of Accum's "Treatise on Adulterations of Food."



Design on Cover of Accum's "Treatise on Adulterations of Food."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Title page of the Second Edition.